

NASA GSRP First Year Final Report

TITLE: "Personality as it relates to decision making, information processing and error management in commercial aviation", NGT-1-52230

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Progress has been made on "Personality as it relates to decision making, information processing and error management in commercial aviation" in several areas during the first phase of the project.

The simulator

The simulator used for the project has been upgraded from FL Sim 7.0 to FL Sim 8.0. The scenario has been completely programmed into the simulator. We have tested the programmed simulator, running the scenario through a number of different pilot decision-making responses. The pilot decision-making responses were based on a decision tree model that included rational and irrational decision-making alternatives to the four system failures in the scenario. All known simulator system difficulties with the simulator have been resolved or accommodated.

The scenario

The scenario has undergone minor modification to adjust for the capabilities of the simulator and to better observe participant behavior. Several modifications were made. An extra researcher/assistant will be added, playing the role of Air Traffic Controller (ATC) and interacting with the participants during the simulation. The total number of possible alternative destinations has been limited due to limitations of the simulator.

Modifications to the design

A measure of hazardous attitudes will be added to the design. A structured post-test interview was designed to measure decision-making and situation awareness. Also, an additional standardized measure of situation awareness will be included to address boredom and vigilance decrement issues. An observation/behavior checklist was designed to measure participant decision-making and decision-making error.

Design review

A preliminary design review was held in November. Minor adjustments were made to the design of the experiment by the addition of several measures, which are described above. A critical design review will be held within the next 30 days. We tentatively plan to start running subjects with the next 45 to 60 days.

Center research advisor

The project advisor was transitioned from Paul Schutte to Jennifer L. Burt, Ph.D. Paul Schutte has taken a temporary LOA from NASA. Dr. Burt has taken over all of the responsibilities of center research advisor.